STATE OF VERMONT
PUBLIC SERVICE BOARD

Petition of Vermont Gas Systems, Inc., for a certificate of public good, pursuant to 30 V.S.A. § 248 , authorizing the construction of the "Addison Natural Gas Project" consisting of approximately 43 miles of new natural gas transmission pipeline in Chittenden and Addison Counties, approximately 5 miles of new distribution mainlines in Addison County, together with three new gate stations in Williston, New Haven and Middlebury, Vermont	))))))))	Docket No. 7970

<u>REPLY BRIEF OF AARP – DECEMBER 23, 2015</u>

The proposed decision and briefing submitted by the Department of Public Service and Vermont Gas Systems, Inc., fail to address the principal factual and legal issues awaiting decision by the Board. The company's brief also relies upon a misunderstanding of the Board's authority to impose substantial cross-subsidies.

1. *THE DEPARTMENT'S AND THE COMPANY'S SUBMISSIONS DO NOT ADDRESS THE PRINCIPAL FACTUAL AND LEGAL ISSUES BEFORE THE BOARD*

   A. *The MOU and the VRCP 60(b)(2) Motions -- Newly Discovered Evidence*

The Department's and the company's briefs argue, correctly, that the MOU rate base cap limits the potential size of the rate base attributable to Phase 1 – but these briefs fail to address the necessary next step in the analysis, which is whether that cap turns the tide on a project that has lost its original benefits and gained very substantial detriments.

The Department and the company's briefs do not address this overarching issue because they considered only one of the three fundamental changes which have occurred since the project was approved in 2013. The briefs address the increase in project cost, but not the replacement of propane and oil by CNG by industrial and commercial users in Middlebury and not the widespread acceptance and effectiveness of cold climate heat pumps for the residential users that Phase 1 also was designed to serve.

These *three* changes alter the three most compelling reasons articulated by the Board for approving of the project in 2013. The project was found by the Board to produce very large savings in GHG emissions by replacing propane and oil use in Middlebury -- 220,000 tons over twenty years.[1] These findings are no longer true. The project was found by the Board to save GHG and money for residential users (including 40% reduction in heating bills if the pipeline were built),[2] and therefore, consistent with the Comprehensive Energy Plan, it was "necessary" to expand use of a nonrenewable fuel.[3] These findings also are no longer true, because cold climate heat pumps provide better GHG reductions and similar cost reductions without a pipeline, rendering the pipeline no longer "necessary" to achieve either GHG reductions or cost savings.[4] And the project was found to generate a net positive impact on the Vermont economy over twenty years. This remains true only if one rejects both Dr. Dismukes testimony *and* Dr. Hopkins' testimony. Dr. Dismukes' analysis demonstrates that the post-MOU NPV of the project remains well below zero

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[1] 12/23/113 Order, page 1.
[2] 12/23/113 Order, page 1.
[3] The Board stated in its 12/23/15 Order, in Finding 512, that the Comprehensive Energy Plan seeks to increase use of natural gas "where nonrenewable fuels <u>remain necessary.</u>" (Emphasis added.)
[4] Neme May 6, 2015 Attachment B (Report) Tables 7 & 9 and pp.7-9 (GHG); Neme pft pp.5-6, Neme rebuttal pft p.3, Neme Attachment B p.5 (customer costs). Hopkins May 27, 2015 rebuttal p.8 Answer 8 (Neme's analysis of NPV of customer savings is "quite well done"); Hopkins 6/23/15 transcript p.112 (agrees with Neme's analysis of distribution losses). Tables 6 and 7 of Mr. Neme's report shows a 5% advantage of heat pumps over gas in reducing GHG for customers who switch from oil, and an 8% advantage of heat pumps over gas for those who switch from propane. Over the 70-year lifetime of the project, these differences produce large increases in GHG emissions from the project as compared to installation of heat pumps.

even without consideration of CNG. Dr. Hopkins' evaluation of post-MOU NPV becomes negative once Dr. Hopkins' assessment of the lost value from CNG is taken into account.[5] Going forward with the project will *hurt* the Vermont economy, in other words, according to the Department's most well-informed expert witness.

The Department's and the company's briefs do not address the first two changes.

The Department's brief addresses the third change but only in part. It argues that Dr. Dismukes' NPV analysis is flawed -- but it does not address why the Board should disregard the economic analysis of the Department's own witness, Dr. Hopkins, showing that the project will cause a net contraction in the state's economy. Dr. Hopkins does not believe it is fair to the utility to take into account up-to-date information about the impact of the project on the Vermont economy, but he acknowledged he was unfamiliar with Board precedent governing a utility's continuing duty after receipt of a C.P.G. and commencement of investment to monitor, assess and review whether going forward remains in the best interests of ratepayers. Dr. Hopkins' calculations show that the effect of going forward post-MOU will harm the Vermont economy, because the presence of CNG has removed over $70 million from the project's NPV. This change means that, using his own post-MOU NPV calculations, the NPV of the project has fallen below zero (November 6, 2015, prefiled testimony p.15, using Dr. Hopkins' workpapers on lost value from CNG). The Department and the company do not explain how or why the MOU alters or undermines this economic analysis.

B. The MOU and the VRCP 60(b)(1) Motion -- Mistake

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[5] Nagle 8/14/13 PFT p.4 (CNG and the project are mutually exclusive); Poor 8/14/13 PFT p.11 (CNG and the project are mutually exclusive); Dismukes 11/23/15 pft pp.13-17 (NPV below zero using Dr. Hopkins' calculations); 12/9/15 transcript pp.118-119 (Hopkins unfamiliar with Board policy on post-CPG duty of utility to reconsider project if economics change).

The Department's and the company's briefs do not address how the MOU or the Over & Under Piping history relate to whether the Board made mistaken findings in 2013 or in 2014 under Rule 60(b)(1) and Murphy v. Tax Department, 173 Vt. 571, 573 (2001).

C. The MOU and the VRCP 60(b)(3) Motion – Nondisclosure

The Department's and the company's briefs do not address how the MOU relates to the company's assurance to the Board in the fall of 2014 that it had faith in the reliability of its new $121.6 million cost estimate, and that the Board should have faith in that figure as well -- while withholding from the Board Mr. Roam's realization that the project was going to cost "quite a bit more" than $121.6 million.

Nor do the briefs address how the MOU relates to the decision by VGS not to disclose (in answer to questions about whether VGS' faith in the $121.6 million estimate was founded upon any fixed price contracts) that the $45 million unsigned contract it had entered into with Over & Under Piping was intended to be a fixed price contract.

The Department and the company do not provide any basis for concluding that, because of the MOU, the company's nondisclosures did not deprive AARP, Ms. Lyons the Palmers and CLF of the opportunity to fully and fairly litigate their claims in 2014 under V.R.C.P. 60(b)(3), Frederick v. Kirby Tankships, Inc., 205 F.3d 1277, 1287 (11^{th} Cir.) and Bardill Land & Lumber v. Davis, 135 Vt. 81, 82, 370 A.2d 212, 214 (1977).

2. THE DEPARTMENT'S CRITICISMS OF DR. DISMUKES' ANALYSIS CONTRADICT THE BOARD'S 2013 ORDER AND THE TESTIMONY OF THE DEPARTMENT'S OWN WITNESSES

The Department's Brief (p.8) criticizes Dr. Dismukes for utilizing the wrong NPV payback period, for using the weighted average cost of capital as the discount rate instead of the societal rate, and for using an outputs model.

The payback period. The Department's brief addresses the payback period by referring the reader to the Department's July 8, 2015 brief. At page 15 of that brief the Department criticized Dr. Dismukes for using a 20-year payback period. But Dr. Dismukes explained in his May 27, 2015 prefiled testimony, at pp.6-13, that he focused on a 20-to-35-year payback period, not a 20-year period. He explained that the analysis relied on by the Board in 2013 had been a 20-year period, so for the sake of comparison a 20-to-35 year time period is appropriate. He also examined a 70-year payback period, and he explained why using a time period longer than 35 years would not provide useful results.

The discount rate. Dr. Dismukes explained on pages 13-20 of his May 27, 2015 prefiled testimony that use of a societal discount rate to evaluate the NPV of the economic impact of the project would be misleading and would harm ratepayers. The Department's December 17, 2015 brief refers the reader to its July 8, 2015 on the subject of the appropriate discount rate. On page 15 of the July 8 brief the Department argued in favor of using multiple discount rates, apparently including the societal discount rate, to evaluate the NPV of the economic impact of the project. The Department's proposed finding #15 in its December 17, 2015 brief identifies Dr. Dismukes' use of the weighted average cost of capital as a principal source of the discrepancy between Dr. Dismuke's modeling and that of the Department

Nowhere does the Department recognize that *its own expert*, Jatinder Kumar, testified on pages 15-16 of his prefiled testimony that the weighted average cost of capital is the *lowest* discount rate that should be used in addressing the NPV of the project and itself may be too low. The Board's precedents support Mr. Kumar.[6] Neither the latest brief nor the July 8 brief explain why Mr. Kumar's testimony and the Board's precedents should be disregarded when evaluating the post-MOU NPV of the project.

The output model. The Department's brief also criticizes Dr. Dismukes' use of an output model rather than a GDP model -- without acknowledging that the company's NPV expert (Mr. Carr) and the Department's own experts all have concluded that use of an output model is appropriate. 6/23/15 transcript pp 95-97.

Dr. Hopkins testified that the output model is useful but the GDP model provides greater accuracy. However, this discrepancy is beside the point. Dr. Hopkins analysis of NPV using the GDP model led him to conclude that the NPV of the project, post-MOU, is $52-71 million using the weighted average cost of capital as the discount rate. Hopkins 1/6/15 pft p.9. Once the amount of lost value found by Dr. Hopkins to arise from existing CNG service in Middlebury is accounted for, the NPV of the project is negative. Dismukes 11/23/15 pft p.15 (NPV below zero using Dr.

> [6] I recommend that the Board conclude that it is not appropriate to use a societal discount rate in calculating levelized avoided costs. The Board has only accepted the use of a societal discount rate in the context of screening energy efficiency measures for cost-effectiveness using the societal cost test and the discount rate reflects the value energy efficiency measures bring to society as a whole.[39] When the Board first adopted this practice, it concluded that the use of a utility weighted-average cost-of-capital discount rate is appropriate for a utility-based screening test, whereas for society as a whole, the discount rate is often lower because an individual or company's investment decisions have impacts on others (such as the effects of a company's increased spending or savings on a company's other customers or other local businesses).

Investigation into Establishing Rates for Power Sold to the Purchasing Agent Pursuant to Public Service Board Rule 4.100, 16 U.S.C. s 824a-3 and 30 V.S.A. s 209(a)(8), Vermont Public Service Board Docket No. 8010, p. 24 (underlining added).

The Board adopted the Hearing Officer's recommendation, confirming that it is only when screening energy efficiency measures that the societal discount rate should be used.

Hopkins' calculations).

The MOU and the Department's briefing of the MOU do not explain why it serves the general good to raise rates and impose 32 years of cross-subsidy in order to fund a project that will have a net negative effect on the state's economy.

3. THE COMPANY MISUNDERSTANDS THE EXTENT OF PERMISSIBLE CROSS-SUBSIDIES

The company's brief cites to the Board's October 10, 2014 order and December 23, 2013 order and argues that cross-subsidies are common, such as the cross-subsidy of rural customers by urban customers. VGS Brief p.4. The Board's prior orders correctly recognize that some cross-subsidization is common.

However, reliance on this concept to justify 32 years of cross-subsidization in order to expand natural gas service to 3,000 residences and to several Middlebury businesses would extend this argument beyond its generally recognized limits. The relevant question for the Board and for every utility regulatory agency is not whether *some* cross-subsidization is necessary. The time and resources that would be required to design rates so that there is precise cost-allocation, and no cross-subsidization at all, would be daunting. James C. Bonbright, Albert L. Danielsen, and David R. Kamerschen, Principles of Public Utility Rates (Public Utility Reports, Inc., 2d Ed. 1988, ch.19. Deviation from strict cost allocation in order to subsidize certain customers, for example to ensure widespread access to telephone service, is common. A.E. Kahn, The Economics of Regulation; Principles and Institutions (MIT Press, 1988), ch. 7. But this Board, like most utility regulatory agencies, has not been granted limitless discretion to impose a cross-subsidy. Deliberate, significant cross-subsidization requires legislative authorization, because the decision whether or not to embark upon a significant cross-subsidization is a political decision not an economic decision. Investigation into: (1) petition of AARP, for the establishment of reduced rates for low-income consumers of Green Mountain Power Corporation and Central Vermont Public Service Corporation…, Docket No. 7535, Order issued 7/22/2011, pp. 13-15, 43-48; Kahn, The Economics of Regulation, *supra* at p.193.

Here, the legislature has spoken. It has specifically authorized cross-subsidization in order to achieve low-income rates. Investigation into: (1) petition of AARP, *supra*. It has not done so to authorize expansion of gas service. Regardless of whether periods of cross-subsidy for much shorter periods of time, such as five or ten years, may fall within the limits of generally accepted cross-subsidies, this proposal falls outside the dividing line. Compare In the Matter of the Formulation of a Policy Regarding the Rate Treatment Afforded to Expansion of Gas Service into New Franchise Areas, Case 89-G-078, New York Public Service Commission, December 11, 1989 (allowing expansion into new service territories where the investment generates revenue sufficient to meet carrying costs after five years but during the five-year period half of the development costs are excluded from rate base, and new customers may pay a surcharge to meet carrying costs). See also Certification of New Interstate Natural Gas Pipeline Facilities, Order Clarifying Statement of Policy, 90 FERC ¶ 61,128 (Feb. 9, 2000) (gas company generally cannot rely on existing customers to meet its rate of return while expanding).

CONCLUSION

The Department and the company's submissions ignore the principal legal and factual issues before the Board and would impose a substantial cross-subsidy without legislative approval. The Board should reopen the C.P.G. and order a halt to construction of the project.

Dated at Bristol, Vermont, this 23rd day of December, 2015.

AARP

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